

**Miniature PCB Relay SDT-R**

- 10A contact rating
- UL TV-5 and TV-8 rating
- 1 form A (NO) contact arrangement
- Sensitive and standard coils available

Typical applications  
Appliances, HVAC, cable TV, monitor display



**Approvals**  
UL E58304, TUV R50138781, VDE 40019832, CQC03001002917  
Technical data of approved types on request

**Contact Data**

|                                     |                               |
|-------------------------------------|-------------------------------|
| Contact arrangement                 | 1 Form A (NO)                 |
| Rated voltage                       | 250VAC, 30VDC                 |
| Max. switching voltage              | 250VAC, 30VDC                 |
| Rated current                       | 5 to 10A                      |
| Contact material                    | AgSnO <sub>2</sub>            |
| Min. recommended contact load       | 100mA at 5VDC                 |
| Frequency of operation              | 360 ops./h                    |
| Operate/release time max.           | 15/5ms                        |
| Electrical endurance                |                               |
| SDT-LMR(2): 5A, 250VAC res, 70°C    | 100x10 <sup>3</sup> ops.      |
| TV-5, 120VAC                        | 25x10 <sup>3</sup> ops.       |
| SDT-DMR(2): 10A, 250VAC res, , 70°C | 100x10 <sup>3</sup> ops.      |
| TV-8, 120VAC                        | 25x10 <sup>3</sup> ops.       |
| Contact ratings                     | 5 to 10A                      |
| Mechanical endurance, DC coil       | 10x10 <sup>6</sup> operations |

**Coil Data**

|                                     |            |
|-------------------------------------|------------|
| Coil voltage range                  | 3 to 48VDC |
| Operative range, IEC 61810          | 1          |
| Coil insulation system according UL | Class E    |

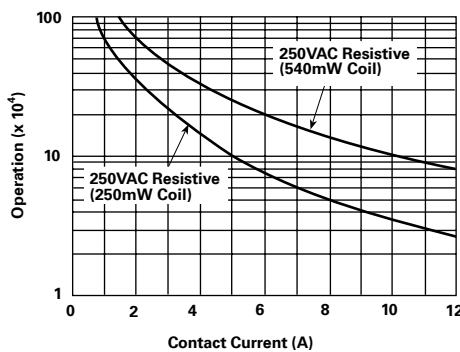
**Contact Data (continued)**

**Coil versions, DC coil**

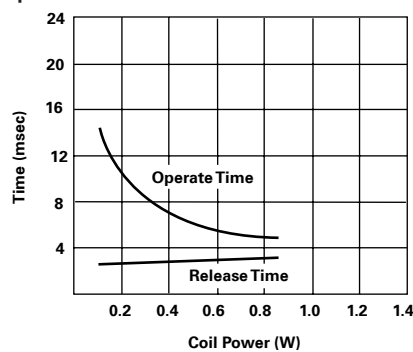
| Coil code                     | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-------------------------------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| <b>SDT-LMR &amp; SDT-DMR2</b> |                   |                     |                     |                       |                     |
| 003                           | 3                 | 2.25                | 0.3                 | 36                    | 250                 |
| 005                           | 5                 | 3.75                | 0.5                 | 100                   | 250                 |
| 006                           | 6                 | 4.50                | 0.6                 | 144                   | 250                 |
| 009                           | 9                 | 6.75                | 0.9                 | 324                   | 250                 |
| 012                           | 12                | 9.00                | 1.2                 | 576                   | 250                 |
| 018                           | 18                | 13.50               | 1.8                 | 1296                  | 250                 |
| 024                           | 24                | 18.00               | 2.4                 | 2304                  | 250                 |
| <b>SDT-DMR</b>                |                   |                     |                     |                       |                     |
| 003                           | 3                 | 2.25                | 0.3                 | 16.7                  | 540                 |
| 005                           | 5                 | 3.75                | 0.5                 | 46.3                  | 540                 |
| 006                           | 6                 | 4.50                | 0.6                 | 66.7                  | 540                 |
| 009                           | 9                 | 6.75                | 0.9                 | 150                   | 540                 |
| 012                           | 12                | 9.00                | 1.2                 | 267                   | 540                 |
| 018                           | 18                | 13.50               | 1.8                 | 600                   | 540                 |
| 024                           | 24                | 18.00               | 2.4                 | 1067                  | 540                 |
| 048                           | 48                | 36.00               | 4.8                 | 4267                  | 540                 |
| <b>SDT-LMR2</b>               |                   |                     |                     |                       |                     |
| 003                           | 3                 | 2.25                | 0.3                 | 60                    | 150                 |
| 005                           | 5                 | 3.75                | 0.5                 | 167                   | 150                 |
| 006                           | 6                 | 4.50                | 0.6                 | 240                   | 150                 |
| 009                           | 9                 | 6.75                | 0.9                 | 540                   | 150                 |
| 012                           | 12                | 9.00                | 1.2                 | 960                   | 150                 |
| 018                           | 18                | 13.50               | 1.8                 | 2160                  | 150                 |
| 024                           | 24                | 18.00               | 2.4                 | 3840                  | 150                 |

All figures are given for coil without pre-energization, at ambient temperature +23°C

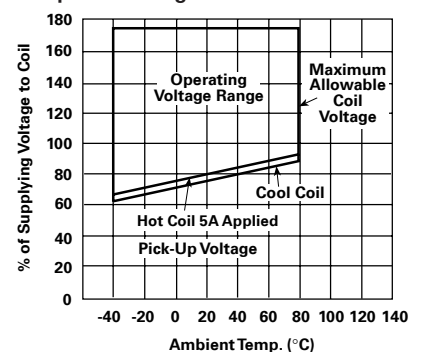
**Electrical endurance**



**Operate time**



**Coil operative range**



**Miniature PCB Relay SDT-R** (Continued)

**Insulation Data**

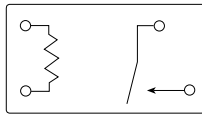
|                             |                      |
|-----------------------------|----------------------|
| Initial dielectric strength |                      |
| between open contacts       | 1000V <sub>rms</sub> |
| between contact and coil    | 4000V <sub>rms</sub> |
| Clearance/creepage          |                      |
| between contact and coil    | >1.6/3.2mm           |

**Other Data**

|   |   |
|---|---|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customersupport/rohssupportcenter">www.te.com/customersupport/rohssupportcenter</a> |   |
| Ambient temperature   | -30°C to +70°C  |
| Category of environmental protection  |   |
| IEC 61810   | RTII - flux proof,<br>RTIII - wash tight                                  |
| Shock resistance (functional)   | 10g   |
| Shock resistance (destructive)  | 100g  |
| Weight  | 11g   |
| Resistance to soldering heat THT  |   |
| IEC 60068-2-20  | RTII: 270°C/10s<br>RTIII: 260°C/5s  |
| Packaging/unit  | tube/25 pcs., carton box/1000 pcs.<br>tray/100 pcs., carton box/1000 pcs. |

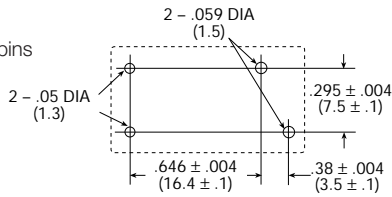
**Terminal assignment**

Bottom view on solder pins

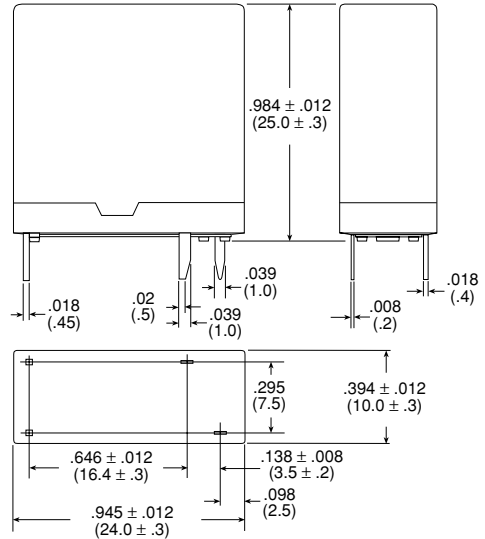


**PCB layout**

Bottom view on solder pins



**Dimensions**



**Miniature PCB Relay SDT-R** (Continued)

|                               |   |            |           |   |           |                            |          |          |          |             |
|-------------------------------|---|------------|-----------|---|-----------|----------------------------|----------|----------|----------|-------------|
| <b>Product code structure</b> | Typical product code  | <b>SDT</b> | <b>-S</b> | <b>-1</b>   | <b>12</b> | <b>D</b>                   | <b>M</b> | <b>R</b> | <b>2</b> | <b>,000</b> |
| <b>Basic type</b>             | <b>SDT</b> Miniature PCB Relay SDT-R                          |            |           |   |           |                            |          |          |          |             |
| <b>Enclosure</b>              | <b>S</b> Snap on cover  |            |           |   |           |                            |          |          |          |             |
| <b>Number of poles</b>        | <b>1</b> 1 pole   |            |           |   |           |                            |          |          |          |             |
| <b>Coil voltage</b>           | Coil code: please refer to coil versions table (e.g. 05=5VDC) |            |           |   |           |                            |          |          |          |             |
| <b>Coil input</b>             | <b>D</b> Standard (540mW)                                     |            |           |   |           | <b>L</b> Sensitive (250mW) |          |          |          |             |
| <b>Contact arrangement</b>    | <b>M</b> 1 form A (NO) contact                                |            |           |   |           |                            |          |          |          |             |
| <b>Design</b>                 | <b>R</b> New design   |            |           |   |           |                            |          |          |          |             |
| <b>Coil type</b>              | <b>Blank</b> Standard   |            |           | <b>2</b> as LMR2: 150mW coil consumption<br>as DMR2: 250mW coil consumption |           |                            |          |          |          |             |
| <b>Suffix</b>                 | <b>,000</b> Standard  |            |           |   |           |                            |          |          |          |             |

Other types on request

| Product code      | Coil  | Coil sensitivity | Design     | Cont.material      | Arrangement   | Coil type     | Part number |
|-------------------|-------|------------------|------------|--------------------|---------------|---------------|-------------|
| SDT-S-105LMR,000  | 5VDC  | Sensitive        | new design | AgSnO <sub>2</sub> | 1 form A (NO) | 250mW         | 8-1419125-1 |
| SDT-S-112LMR,000  | 12VDC |                  |            |                    |               | standard coil | 9-1419125-9 |
| SDT-S-124LMR,000  | 24VDC |                  |            |                    |               |               | 1419126-2   |
| SDT-S-103DMR,000  | 3VDC  | Standard         |            |                    |               | 540mW coil    | 1461267-1   |
| SDT-S-105DMR,000  | 5VDC  |                  |            |                    |               | standard coil | 8-1419125-0 |
| SDT-S-112DMR,000  | 12VDC |                  |            |                    |               |               | 9-1419125-7 |
| SDT-S-118DMR,000  | 18VDC |                  |            |                    |               |               | 1461267-3   |
| SDT-S-124DMR,000  | 24VDC |                  |            |                    |               |               | 1419126-1   |
| SDT-S-148DMR,000  | 48VDC |                  |            |                    |               |               | 1461023-2   |
| SDT-S-105LMR2,000 | 5VDC  | Sensitive        |            |                    |               | 150mW coil    | 8-1419125-3 |
| SDT-S-109LMR2,000 | 9VDC  |                  |            |                    |               |               | 9-1419125-5 |
| SDT-S-105DMR2,000 | 5VDC  | Standard         |            |                    |               | 250mW coil    | 9-1440002-6 |
| SDT-S-109DMR2,000 | 9VDC  |                  |            |                    |               |               | 9-1440002-8 |